(i) contacting a population of T cells from the patient with the peptide represented by SEQ ID NO:1 and, optionally, one or more further peptides selected from the group consisting of the peptides represented by SEQ. ID. NOs. 2 to 11 and

(ii) determining *in vitro* whether the T cells of said T cell population recognize said peptide(s).

28. A method of determining in a human patient infection by, or exposure to, a mycobacterium which expresses ESAT-6, said method comprising determining whether T cells of the patient recognize the peptide represented by SEQ ID NO:1 and, optionally, one or more further peptides represented by SEQ. ID. NOs. 2 to 11.

29. A method according to claim 27 or claim 28 wherein a peptide panel is employed consisting of, in addition to the peptide represented by SEQ. ID NO:1, one or more peptides selected from the group consisting of the peptides represented by SEQ. ID. NOs. 2 to 11.

30. A method according to claim 29 wherein at least the peptides represented by SEQ. ID. NOs. 1 to 8 are employed.

31. A method according to claim 30 wherein one or more further peptides are employed selected from the group consisting of the peptides represented by SEQ. ID. NOs. 9, 10 and 11.

32. A method according to claim 27 or claim 28 wherein any of said peptides is substituted by an analogue which binds a T cell receptor which recognizes the peptide.

33. A method as claimed in claim 27 or claim 28 wherein any of said peptides is substituted by a peptide analogue which is at least 70% homologous, preferably at least 80% homologous, more preferably at least 90% homologous, to the entire corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

34. A method as claimed in claim 27 or claim 28 wherein any of said peptides is substituted by a peptide analogue which has one or more deletions at the N–terminus and/or C-terminus and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

35. A method as claimed in claim 27 or claim 28 wherein any of said peptides is substituted by a peptide analogue which has one or more conservative substitutions compared to the corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

36. A method according to claim 27 or claim 28 in which the recognition of the peptide(s) by the T cells is determined by determining secretion of a cytokine from the T cells.

37. A method according to claim 36 in which IFN-γ secretion from the T cells is determined.

38. A method according to claim 37 in which IFN-γ secretion from the T cells is determined by allowing secreted IFN-γ to bind to an immobilized antibody specific to the cytokine and then determining the presence of antibody/cytokine complex.

39 . A method according to claim 27 in which the T cells are freshly isolated *ex vivo* cells from peripheral blood.

40. A method according to claim 27 in which the T cells are pre-cultured *in vitro* with the peptide(s).

41. A method according to claim 27 or claim 28 in which the mycobacterium is *M. tuberculosis* or *M. bovis*.

42. A method as claimed in claim 29 wherein said peptides are pooled.

43. A method as claimed in claim 27 or claim 28 wherein presence of a mycobacterium which expresses ESAT-6 is determined in a suspected healthy contact who has been exposed to say mycobacterium.

44. A kit for carrying out a method of determining infection in a human patient by, or exposure of a human patient to, a mycobacterium which expresses ESAT-6 comprising a peptide panel consisting of, in addition to the peptide represented by SEQ ID NO: 1, one or more peptides selected from the group consisting of the peptides represented by SEQ ID NOs: 2 to 11, and optionally a means to detect the recognition of a peptide by the T cells.

45. A kit according to claim 44 wherein at least the peptides represented by SEQ. ID Nos. 1 to 8 are employed.

46. A kit according to claim 44 wherein one or more further peptides are employed selected from the group consisting of the peptides represented by SEQ. ID. Nos 9, 10 and 11.

47. A kit according to claim 44 wherein any of said peptides is substituted by an analogue which can bind a T cell receptor which recognizes the peptide.

48. A kit as claimed in claim 44 wherein any of said peptides is substituted by a peptide analogue which is at least 70% homologous, preferably at least 80% homologous, more preferably at least 90% homologous to the entire corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

49. A kit as claimed in claim 44 wherein any of said peptides is substituted by a peptide analogue which has one or more deletions at the N-terminus and/or C-terminus and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

50. A kit as claimed in claim 44 wherein any of said peptides is substituted by a peptide analogue which has one or more conservative substitutions compared to the corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

51. A kit according to claim 44 which includes an antibody to IFN-γ.

52. A kit according to claim 51 wherein said antibody is immobilized on a solid support and which optionally also includes a means to detect any antibody/IFN-γ

complex.

53. A method of determining infection in a human patient by, or exposure of a human patient to, a mycobacterium which expresses ESAT-6 which method comprises the steps of;:

(i) administering one or more polynucleotides expressing in human cells the peptide represented by SEQ ID NO: 1 and, optionally, one or more further peptides selected from the group consisting of the peptides represented by SEQ ID NOs: 2 to 11 and

(ii) determining whether T cells of the patient recognize said peptide(s).

54. A method according to claim 53 wherein at least polynucleotides expressing in human cells the peptides represented by SEQ. ID. Nos. 1 to 8 are employed.

55. A method according to claim 54 wherein one or more further polynucleotides are employed selected from the group consisting of polynucleotides expressing in human cells the peptides represented by SEQ. ID. Nos. 9, 10 and 11.

56. A method according to claim 53 wherein any of said peptides is substituted by an analogue which can bind a T cell receptor which recognizes the peptide.

57. A method as claimed in claim 53 wherein any of said peptides is substitute by a peptide analogue which is at least 70% homologous, preferably at least 80% homologous, more preferably at least 90% homologous, to the entire corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substitute peptide.

58. A method as claimed in claim 53 wherein any of said peptides is substituted by a peptide analogue which has one or more deletions at the N-terminus and/or C-terminus and which retains the ability to be recognized by T cells of a T cell populations

which recognize the corresponding substitute peptide.

59. A method as claimed in claim 53 wherein any of said peptides is substituted by a peptide analogue which has one or more conservative substitutions compared to the corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

60. A kit for carrying out a method of determining infection in a human patient by, or exposure of a human patient to, a mycobacterium which expresses ESAT-6 comprising one or more polynucleotides expressing in human cells a peptide panel consisting of, in addition to the peptide represented by SEQ ID NO: 1, one or more peptides selected from the group consisting of the peptides represented by SEQ ID NOs: 2 to 11.

61. A kit according to claim 60 wherein at least polynucleotides expressing in human cells the peptides represented by SEQ. ID. Nos. 1 to 8 are employed.

62. A kit according to claim 61 wherein one or more further polynucleotides are employed selected from the group consisting of polynucleotides expressing in human cells the peptides represented by SEQ. ID. Nos: 9, 10 and 11.

63. A kit according to claim 60 wherein any of said peptides is substituted by an analogue which can bind a T cell receptor which recognizes the peptide.

64. A kit as claimed in claim 60 wherein any of said peptides is substituted by a peptide analogue which is at least 70% homologous, preferably at least 80% homologous, more preferably at least 90% homologous, to the entire corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

65. A kit as claimed in claim 60 wherein any of said peptides is substituted by a peptide analogue which has one or more deletions at the N-terminus and/or C-terminus and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

66. A kit as claimed in claim 60 wherein any of said peptides is substituted by a peptide analogue which has one or more conservative substitutions compared to the corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

67. A pharmaceutical composition comprising a peptide panel consisting of, in addition to the peptide represented by SEQ ID NO: 1, one or more peptides selected from the group consisting of the peptides represented by SEQ ID Nos: 2 to 11 together with a pharmaceutically acceptable carrier or diluent.

68. A pharmaceutical composition according to claim 67 wherein at least the peptides represented by SEQ. ID Nos. 1 to 8 are employed.

69. A pharmaceutical composition according to claim 67 wherein one or more further peptides are employed selected from the group consisting of the peptides represented by SEQ. ID. Nos 9, 10 and 11.

70. A pharmaceutical composition according to claim 67 wherein any of said peptides is substituted by an analogue which can bind a T cell receptor which recognizes the peptide.

71. A pharmaceutical composition according to claim 67 wherein any of said peptides is substituted by a peptide analogue which is at least 70% homologous, preferably at least 80% homologous, more preferably at least 90% homologous to the entire corresponding substituted peptide and which retains the ability to be recognized

by T cells of a T cell population which recognize the corresponding substituted peptide.

72. A pharmaceutical composition according to claim 67 wherein any of said peptides is substituted by a peptide analogue which has one or more deletions at the N-terminus and/or C-terminus and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

73. A pharmaceutical composition according to claim 67 wherein any of said peptides is substituted by a peptide analogue which has one or more conservative substitutions compared to the corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

74. A pharmaceutical composition comprising one or more polynucleotides capable of expressing the peptides of a panel as defined in any one of claims 67 to 73 in human cells, together with a pharmaceutically acceptable carrier or diluent.

75. A method of diagnosing infection in a human patient by, or exposure of a human patient to , a mycobacterium which expresses ESAT-6 which method comprises the steps of:

(i) contacting a population of T cells from the patient with a panel of peptides represented by SEQ. ID. Nos. 1 to 8, wherein said T cells are freshly isolated *ex vivo* cells from peripheral blood, and

(ii) determining *in vitro* whether T cells of said T cell population show a recognition response to said peptides by determining IFN-γ secretion from the T cells.

76. A method as claimed in claim 75 wherein said panel is expanded to additionally include one or more further peptides selected from the group consisting of the peptides of SEQ. ID. Nos. 9 to 11.

77. A method as claimed in claim 75 wherein one or more of said peptides is substituted by an analogue which can bind a T cell receptor which recognizes the peptide.

78. A method as claimed in claim 75 wherein any of said peptides is substituted by a peptide analogue which is at least 70% homologous, preferably at least 80% homologous, more preferably at least 90% homologous, to the entire corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

79. A method as claimed in claim 75 wherein any of said peptides is substituted by a peptide analogue which has one or more deletions at the N-terminus and/or C-terminus and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

80. A method as claimed in claim 75 wherein any of said peptides is substituted by a peptide analogue which has one or more conservative substitutions compared to the corresponding substituted peptide and which retains the ability to be recognized by T cells of a T cell population which recognize the corresponding substituted peptide.

81. A method as claimed in claim 75 wherein said peptides are pooled.

82. A method as claimed in claim 75 wherein presence of a mycobacterium which expresses ESAT-6 is determined in a suspected healthy contact who has been exposed to said mycobacterium.--